

Draft guidelines on dog population control

General Comment: Community participation has been recognised as a key factor in the effectiveness of rabies prevention and control and population management programs. Roaming dogs are frequently tolerated, valued and considered ‘owned’ by communities in developing countries. Typically it is this subpopulation that is targeted for removal during rabies control and prevention campaigns or for other reasons. Drastic control measures often generate community upset. Therefore, the language used to convey how the document will be applied practically is crucial to building trust between the community and the personnel authorised to undertake population management. Together with acknowledgment of the constraints to effective program implementation in developing countries, it is suggested that population *management*, implying an ongoing progressive process within the community, is a preferable term to *control* implying external enforcement on the community. Addressing any one contributing factor, such as reproductive status, in isolation is unlikely to significantly alter population abundance or distribution long term. Effective management of companion animal populations depends on the support and cooperation of all stakeholders including veterinarians, health authorities, local and national government and agencies, animal protection organizations, community leaders, and the general public.

Preamble

Stray and feral dogs pose serious human health, socio-economic, political and animal welfare problems in many countries of the world. Many of these are developing countries and others fall in the least developed category. Whilst acknowledging human health is a priority including the prevention of zoonotic diseases most notably rabies, the OIE recognises the importance of controlling dog population without causing unnecessary or avoidable animal suffering. Veterinary Services should play a lead role in preventing zoonotic diseases and ensuring animal welfare and should be involved in dog population control.

Guiding principles

The following guidelines are based on those laid down in Section 3.7 of the Terrestrial Animal Health Code. Some additional principles are relevant to these guidelines:

- The promotion of responsible dog ownership can significantly reduce the numbers of stray dogs and the incidence of zoonotic diseases

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- Because dog ecology is linked with human activities, management of dog populations has to be accompanied by changes in human behaviour to be effective.

Article 1

Definitions

- a) **Stray Dog:** any dog not under direct control by a person or not prevented from roaming

Types of stray dog

- free roaming owned dog not under direct control or restriction at a particular time
- free roaming dog with no owner
- feral dog: domestic dog that has reverted to the wild state and no longer directly dependant upon humans for successful reproduction.

- b) **Owned Dog:** Means dog with a person that is responsible for this animal.

- c) **Person:** This can include more than one individual, and could comprise family/household members or an organisation .

- d) ~~**Responsible Ownership:** The situation whereby a person(as defined above) accepts and commits to perform various duties focused on the satisfaction of the psychological, environmental and physical needs of a dog (or other pet) and to the prevention of risks (aggression, disease transmission or causing injuries) that the pet may cause to the community or the environment~~

Responsible Owner/s: A person, or collective group of people, who accepts responsibility for and undertakes to provide the dog with an appropriate environment that allows it to satisfy its needs whilst practicably limiting the risk the dog may cause to the community, other domestic animals or environment.

- e) **Euthanasia:** The act of inducing death in a humane manner.

- f) **Competent Authority:** Means the *Veterinary Services*, or other Authority of a Member Country, having the **responsibility** and competence and for ensuring or supervising the implementation of animal health measures or other standards in the *Terrestrial Code*.

- g) **Dog Population Control Programme:** A programme with the objective of reducing the number of stray dogs.

- h) **Carrying capacity:** Is the upper limit of the dog population density that could be supported by the habitat based on the availability of resources (food, water, shelter), and human acceptance.

Article 2

Dog population control program optional objectives

The objectives of a program to control [the](#) dog population may include the following:

1. improve health and welfare of owned and stray dog population;
2. reduce numbers of stray dogs;
3. create a rabies immune dog population;
4. promote responsible ownership;
5. reduce the risk of zoonotic diseases other than rabies;
6. manage other risks to human health ([eg parasites](#));
7. prevent harm to the environment.

Article 3

Responsibilities and competencies

a) Veterinary Administration

The Veterinary Administration is responsible for the implementation of animal health legislation and for controlling outbreaks of notifiable animal diseases such as foot and mouth disease and avian influenza. Control of endemic zoonotic diseases such as rabies and parasitic infections (eg Echinococcus) would require technical advice from the Veterinary Administration, as animal health and some aspects of public health are within this Administration's competence but organising and/or supervising dog control schemes is frequently the responsibility of government agencies other than the Veterinary Administration.

In many countries the Veterinary Administration is in the Ministry of Agriculture.

b) Other Government Agencies

The responsibilities of other government agencies will depend on the disease and the objective/nature of the dog population control measures employed.

The Ministry or other Agency responsible for Public Health would normally play a leadership role and may have legislative authority in dealing with zoonotic diseases. Control of stray dogs ~~in regards~~ [with regard](#) to other human health risks (eg stray dogs on roads; dog attacks within communities) may fall within the responsibility of the Public Health Agency but is more likely to be the responsibility of police or other agencies for public safety/security operating at [the](#) State/Provincial or municipal level.

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Environment Protection Agencies (normally within a National or State/Provincial Ministry for the Environment) may take responsibility for ~~the~~ controlling problems associated with stray dogs when they present a hazard to the environment (eg control of feral dogs in national parks; prevention of dog attacks on wildlife) or where a lack of environmental controls is giving rise to stray dog populations that threaten human health or access to amenities. For example, Environmental Protection agencies may regulate and enforce measures to prevent dogs (and other wild animals) from accessing waste or human sewage.

c) Private Sector Veterinarians

The private sector veterinarian is responsible for providing advice to pet owners consulting the veterinarian for advice or treatment of a dog. The private sector veterinarian can play an important role in disease surveillance ~~as~~ because he/she might be the first to see a dog suffering from a notifiable disease such as rabies. It is necessary that the private sector veterinarian follow the procedure established by the Veterinary Administration for responding to and reporting a suspected rabies case or a dog that is suffering from any other notifiable disease. Private sector veterinarians also play an important role (often in liaison with the police) in dealing with cases of neglect that can lead to problems with stray and mismanaged dogs.

The private veterinarian has competence and will normally be involved in pet dog health programmes and population control measures, including health testing and vaccination, kennelling during the absence of the owner, sterilisation and euthanasia. Two-way communication between the private sector veterinarian and Veterinary Administration, often via the medium of a veterinary professional organisation, is very important and the Veterinary Administration is responsible to set up appropriate mechanisms for this action.

d) Non Governmental Organisations (NGOs)

NGOs are potentially an important partner of the Veterinary Services in contributing to public awareness and understanding and helping to obtain resources to contribute in a practical way to the design and successful implementation of dog control programmes. NGOs can supply local knowledge on dog populations and features of ownership, as well as expertise in handling and kennelling dogs and the implementation of large scale vaccination and sterilisation programmes. NGOs can also contribute, together with veterinarians and the authorities in educating the public in responsible dog ownership. NGOs can help to obtain funding for control programmes, particularly in countries where governments may depend on support from NGOs for programs carried out to assist poor communities.

e) Local Government Authorities

Local Government Authorities are responsible for many services and programmes that relate to health, safety and public good within their jurisdiction. In many countries the

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legislative framework gives authority to local government agencies in regard to aspects of public health, environmental health/hygiene and inspection/compliance activities.

In many countries local government agencies are responsible for the control of stray dogs (eg dog catching and shelters) and the alleviation of the problems stray dogs cause. This would normally be done with advice from a higher level (national or state/provincial) authority with specialised expertise in regard to public health and animal health. Collaboration with the private sector veterinarians (eg in programs to sterilise and vaccinate stray dogs) is a common feature of dog control programs. Regardless of the legislative basis, it is essential to have the co-operation of local government authorities in the control of stray dogs.

Article 4

Considerations in planning dog population control programme measures

In the development of dog population control programs it is recommended that the authorities establish an advisory group which would include appropriate veterinarians, experts, and stakeholders. The main purpose of this advisory group would be to analyse the problem, identify the causes and propose the most effective approaches to use in the short and long term.

Important considerations

- a) Identifying the sources of stray dogs
 - Owned animals that roam freely
 - Animals that have been abandoned by their owner, including animals resulting from:
 - Uncontrolled breeding of owned dogs
 - Unowned dogs that reproduce successfully.

- b) Estimating the existing number, distribution and ecology **(To be completed)**

Using available practical tools such as registers of dogs, population estimates, surveys of dogs, owners, dog shelters and associated veterinarians etc. A methodology must be established in order to make an estimate of the total dog population. The same methodology must be used at appropriate intervals to assess population trends. Find references if possible:

- Identify the important factors relevant to dog carrying capacity of the environment. These generally include food, shelter, water, and human behaviour
- Add examples of good methodology if possible.

- c) Legislation

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Legislation that would help authorities ~~establish~~ ~~to establishing~~ successful dog control programmes should include the following key elements:

- Registration and identification of dogs and licensing of owners
- Rabies vaccination
- Veterinary procedures (e.g. surgical procedures)
- Control of dog movement (restrictions within the country)
- Control of dog movement (international movement)
- Control of dangerous dogs
- Commercial dog production

Environmental controls (e.g. abattoirs, rubbish dumps, dead stock facilities)

- Dog shelters
- Animal welfare, including humane capture and killing methods.

d) Resources available to authorities

- Human resources
- Financial resources
- Technical tools
- Infrastructure
- Cooperative activities (D. Wilkins)
- Public-private-NGO
- Central-state or province-local.

Article 5

Control measures

The following control measures should be implemented according to the situation in Member Countries. They can be used in combination or singly.

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a) Education and promotion of responsible ownership (To be completed)

The health and welfare of domestic dogs may be improved through the promotion of responsible human ownership. Minimizing ~~stray dogs~~ the stray dog population, in combination with educating humans, particularly children about specific behaviours, can reduce dog bite injury and prevent some major zoonotic diseases.

Responsible dog ownership includes the control of reproduction of dogs under direct human supervision such that offspring of owned dogs are not abandoned.

b) Registration and identification (licensing)

A core component of dog population management by Competent Authorities is the registration and identification of owned dogs and granting licences to owners. This may be emphasized as part of responsible dog ownership and is often linked to animal health programs, for example, mandatory rabies vaccination.

Registration and identification of animals may be used as a tool to encourage dog reproduction control of owned dogs through a reduced fee schedule to register neutered dogs.

c) Reproductive control

Controlling reproduction in dogs prevents the birth of unwanted litters of puppies and can help address the balance between demand for dogs and the size of the population. It is advisable to focus efforts to control reproduction on those individuals or groups in the dog population identified as the most productive and the most likely to be the sources of unwanted and stray dogs, ~~as this will~~ to ensure best use of resources. Methods of controlling reproduction will require direct veterinary input to individual animals, involvement of both private and public veterinary sectors may be required to meet demand. The control of reproduction is essentially the responsibility of owners and can be incorporated into education on responsible ownership (section 5 a.). Methods for controlling reproduction in dogs include:

- i) Surgical sterilisation
- ii) Chemical sterilisation
- iii) Chemical contraception
- iv) Separation of female dogs during oestrus from ~~entire~~ intact males.

Any chemicals or drugs used in controlling reproduction should be shown to have appropriate safety, quality and efficacy for the function required and used according to the

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manufacturer's and Competent Authorities Authority's regulations. In the case of chemical sterilants and contraceptives, this may require further research and trials to be completed before use.

d) Removal and handling

The *Competent Authority* should collect dogs that are not under direct supervision and verify their ownership. Capture, transport, and holding of the animals should be done humanely. The *Competent Authority* should develop and implement appropriate legislation to regulate these activities.

e) Management of dogs removed from communities

- Competent authorities have the responsibility to develop minimum standards for the housing (physical facilities) and care of these dogs. There should be a provision for holding the dogs for a reasonable period of time to allow for reunion with the owner and, as appropriate, for rabies observation. A period of 7 -10 days is often used for this purpose.
- Dogs that are removed from a community may be reunited with the owner or offered to new owners for adoption who agree to take responsibility for the health, welfare and management of the animal. This provides an opportunity to promote responsible ownership including animal health care through vaccination against common diseases of dogs, control of ecto- and endo-parasites, and vaccination against major zoonotic diseases such as rabies. Incentives for dog reproduction control may be provided through the provision of neutering services at a reduced rate or the release for adoption of only neutered animals. The effectiveness of this strategy i.e. offering dogs to new owners may be limited due to the suitability and number of dogs.
- Dogs that are removed from a community may in some cases be provided health care (rabies vaccination), neutered, and released to their local community at or near the place of capture. The beneficial effect of this practice for dog welfare and population management is unknown. With regard to disease control, such as for rabies and possibly others, some beneficial effect may be realized. This may be short or long term time.
- If it is not possible to adopt or relocate a removed dog to a suitable environment that meets its needs and limits the risk of zoonoses and other public health concerns and there is no practicable alternative then the animal should be euthanased by a Competent Authority.
- ~~Dogs that are removed from a community may, in some cases, be too numerous to place responsible responsible ownership. If elimination of the excess animals is the only option, killing should be under regulation by a Competent Authority and conducted humanely.~~

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- A number of selected animals, could be released if “*environmentally compatible*”, meaning that, once again, the feasibility of this strategy is very much related to the local [people’s](#) attitude/resources availability:
 - Risk-benefit evaluation of Catch Neuter Release & Monitoring (CNR&M) [programmes](#) in terms of public safety and [AW-animal welfare](#).
 - Proper behavioural evaluation of dogs when removed for problems related to public nuisance
 - Monitoring needed to evaluate individual health and welfare
 - Sufficient level of public tolerance, food and assistance provided by responsible people/community
 - Permanent identification (i.e. surgical sterilization, rabies vaccination, echinococcosis treatment, Leishmaniasis negative test). These actions clearly [reconnect](#) ~~reconnect~~ the animal to an “owner”, both intended as public (local municipality, regional government) or private
 - Possibly clearly visible at distance (i.e. painted collars).

Advantages: [May be a](#) possible strategy in an early stage, when scarce resources are in place, if adopted [in-very for](#) specific situations it may also promote the societal value of animals and the benefits of a positive human-animal relationship (Rome’s cat colony, “community” dogs).

Disadvantages/ Ineffective over ~~a~~ [the](#) long term since [it does not promote](#) ~~not promoting~~ responsible ownership ~~concept~~, possible [AW animal welfare](#) concerns due to persistent intolerance by the community, possible risk to human safety and damage of ~~the~~ private property due to improper selection of animals.

Preferably to be used as a “spot” solution in specific situations and only in addition to other measures (humane education, door-to-door reuniting programs, adoption programs), possibly not to be used as the sole method of stray dog population control as a long term strategy.

f) Environmental controls

Steps should be taken to reduce the carrying capacity, [such as](#) excluding dogs from sources of food (e.g. rubbish dumps and abattoirs, and installing animal-proof rubbish containers).

This should be linked to a reduction in the animal population by other methods, to avoid animal welfare problems.

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g) Control of dog movement – international (export/import)

Chapter 2.2.5 of the Terrestrial Animal Health Code provides recommendations on the international movement of dogs between rabies free countries and countries considered to be infected with rabies.

h) Control of dog movements – within country (e.g. leash laws, roaming restrictions)

Measures for the control of dog movement in a country are generally invoked for three ~~two~~ reasons:

- for rabies control when the disease is present in a country
- for public safety reasons
- for the safety of “owned dogs” in an area or locality when a stray dog control program is in place.

In ~~both~~ these cases it is essential that dogs are registered and permanently identified to control or confine these dogs, reunite them if collected and to keep the relevant sanitary information recorded.

Legislation to give the necessary power is necessary and a national or local infrastructure of organization, administration, staff and resources is essential to encourage the finders of a stray dog to report to the competent authority.

The following 3 grades of movement control can be applied:

- Absolute control (confinement, leash and muzzle), feasible during ~~a~~ limited periods such as for an emergency ~~for emergency~~
- Partial control (obedience if not on leash during daylight, confinement between the relevant ~~information~~ times of 5pm and 8 am)
- Control during specific times (rabies vaccination campaign, stray dog roundup).

i) Regulation of Commercial Animal Dealers

While the majority of animal breeders and dealers are committed to raising and selling physically and psychologically healthy pets, regulation is necessary to ensure that all of these operations provide adequate care.

The law should require the humane care and treatment of certain animals sold as pets in retail stores as well as at the wholesale level, transported in commerce, and used in research or exhibits.

Individuals using or working with such animals should be licensed and they must comply with regulations and standards.

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- Standards of Care and Recordkeeping

Businesses in the commercial pet trade must maintain minimum standards for veterinary care and animal management. The requirements should cover housing, handling, sanitation, food, water, and protection against extremes of weather and temperature.

To prevent lost or stolen animals from entering trade channels, breeders and dealers are required to keep records that identify the source and disposition of all regulated animals that come into their possession.

- Shipping and Handling

Specific regulations and standards are needed to regulate the transport of animals by commercial carriers. These rules help ensure that licensed dealers, contract carriers, and intermediate handlers treat regulated animals humanely. Transported animals must meet established minimum age and health certification requirements.

j) Reduction in dog bite incidence

Propensity to bite is influenced by heredity, early experience, socialisation & training, health and human behaviour towards the dog. Breed or type specific bans are difficult and costly to enforce, provide a false sense of security to the community and, where enacted, no data currently supports them as effective in reducing incidence of dog bites; therefore, they are not recommended. Specific behaviours or incidences can be used as criteria to facilitate identification of a dog as 'dangerous' and appropriate measures taken to control the animal by owner if available and the Competent Authority. ~~the competent authority~~. For example, a dog that has been reported to have bitten someone or something (livestock or pets) may be required by law to be confined on the owner's property and kept on a lead (and if necessary muzzled) when in public. Note that confinement by tethering should be avoided as this can increase the likelihood of aggressive behaviour.

The most effective means of reducing prevalence of dog bites are education and placing responsibility on the owner, not the animal. Dog owners should be trained in principles of responsible pet ownership as described in Article 5.a. Legal mechanisms that enable the competent authorities to impose penalties or otherwise deal with irresponsible owners are necessary. Mandatory registration and identification schemes will facilitate the effective application of such mechanisms. Young children are the most at-risk group for dog bites. Education programmes focussed on appropriate dog-directed behaviour have been demonstrated to be effective in reducing dog bite prevalence and these programmes should be encouraged.

[Additional Section – Community based population management program](#)

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- In some instances, a community-based population management program, facilitated by community stakeholders for the benefit of those communities or community members unable to manage their dogs appropriately, may be appropriate. These programs may have support from external stakeholders, including public health agencies, local authorities, NGOs etc. The program should be based on the elements outlined in Article 5, Sections a), c), f) and h) and complement any other local dog population management programs instituted by the responsible authority as per these Guidelines.

k) Euthanasia

When euthanasia is practised, the procedures used should comply with ~~the presented laid down~~ those presented in the Terrestrial Animal Health Code – 2006 (Article 3.7.6.1).

For reasons of convenience, different procedures could be used in rural and in urban areas. Dogs should only be euthanized after holding for a period of time to ~~allow~~ allows for the owner to locate his/her dog.

Several euthanasia procedures are available. They fall into two major categories based on whether ~~wether~~ it is necessary to handle or restrain the dog or not ~~in order~~ to euthanize it.

Where capture or restraint procedures give rise to a risk or potential risk of human exposure to rabies, procedures that do not require restraint are preferable ~~of dogs are preferable~~.

The methods are not described in any particular order.

	Procedure	Capture	Restraint = Handling	Advantages/Disadvantages
Urban area	Electrocution	Yes	No	Affordable equipment: 220 V mains current; gloves + boots. Instant death.
	Carbon monoxide (CO)	Yes	No	Needs appropriate premises; puts personnel at risk. Slow death.
	CO2	Yes	No	<u>As Since</u> CO2 is heavier than air, the dogs can lift their heads over the CO2 layer and death is slow. <u>Other disadvantages:</u> <ol style="list-style-type: none"> <u>Fear and distress of animals in the chamber</u> <u>Improper administration of the gas extending to time required for euthanasia unnecessarily.</u> <u>Operator risk, particularly with carbon monoxide</u>

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	Barbiturates Intravenous Intracardial Intraperitoneal	Yes Yes Yes	Yes Yes Yes	Requires an appropriate dose and pre-anaesthetic. Administered under veterinary supervision and requires trained personnel. Slow death.
	T-61 – Tanax Intravenous Intracardial Intrapulmonary	Yes Yes Yes	Yes Yes Yes	Dangerous for personnel in the event of accidental injection. Slow death.

Rural area	Free bullet used from <u>short or</u> long range	No	No	Fast death. <u>If shot is inaccurate, and dog is only wounded, suffering will occur and escape is possible;</u> Risk of accident (same as for hunting)
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Comment: use of electrocution and T-61 are not considered humane and are not recommended methods of euthanasia.

Despite the table noting that electrocution, carbon monoxide and carbon dioxide require no restraint or handling of the animal to administer correctly, this is incorrect. All modes of euthanasia require some degree of handling of the animal.

Fractionous or unsocialised dogs that cannot be handled safely for intravenous injection, should receive a pre-euthanasia sedative drug or drug combination prior to sodium pentobarbital injection.

Physical restraint methods may be used as necessary, always ensuring the safety of the operators and the well-being of the animal. Plastic or metal cages with a squeeze mechanism are very useful for small dogs, and are often preferable and safer than other physical restraint methods (such as gloves or control poles) for the handler, and more humane for the animal.

To be developed for each method

1. Introduction
2. Requirements for effective use
3. Advantages
4. Disadvantages
5. Conclusions

Article 6

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Monitoring and Evaluation

To be completed

Article 7

Research needs

To be completed

Article 8

International cooperation

To be completed